Regional Perspectives: Ohio

Introduction by Ed Squiers

Our next speaker is Mick Micacchion. He comes to us from the Ohio EPA. He's a wetlands ecologist and is involved in developing rules and policies, and providing technical assistance on permitting and mitigation. He's going to talk to us about the process that is going on in Ohio, relative to their development of rapid assessment methods for wetlands.

Mick Micacchion, Ohio Environmental Protection Agency

Thank you. I would like to thank the Indiana DNR for inviting me to speak and to attend this seminar. It's been quite interesting. I want to talk a little bit about what's going on in Ohio with rapid assessment. And to do that, I will need to talk about what is going on with our regulatory program and our needs for a rapid assessment.

We're in a process of developing rules for water quality standards. We've kept real active in the last year and a half or so, and we've had a public legal advisory group with members from all the various wetlands interests, who provide input on what should and should not go into the standards. We had some goals for wetland water quality. One thing we wanted to do is vary the levels of protection. And based it pretty much on the existing actual functional integrity of the wetland. The current rules/standards that we have only do 2 things: they recognize wetlands as waters of the state, and they designate all wetlands as state resource water, which gives them a very high level of protection, but which just doesn't work. What we've done is we've developed standards from the state working through the south side public advisory group, and going through a bunch of public hearings, we've developed draft rules and then more public hearings. For those rules you just follow the rules of the state legislature last month, and early next month we'll have a hearing with the legislature. That way we will figure out where we are going with these things. And there is this big structure of what we propose is one designated use applies to all wetlands, and that's just the wetlands. That would be wetland vegetation units. Then there is a narrative, an area of criteria which the Army Corps used. Then we have a tier of wetland vegetation rules, which basically breaks them out into 3 categories. It basically separates wetlands based on the levels of function they perform. Category one is a lower functioning wetland, 3 being a higher functioning wetland.

We have provided definitions in the rules of what defines different categories of wetlands. Basically the category 1's support minimal habitat, hydrological, and vegetation functions. When we say hydrological we mean a whole range of water-dependent functions. Some of the things that category 1 might typify would be hydrologic isolation, low species diversity, dominated by non-native species, and no significant wildlife habitat. Then we vary the review as we gather requirements for each category of wetlands.

Category 2 supports moderate to high water for recreational functions. Some of the things that the rules state you might find in category 2 wetlands include dominated by native species, but generally without habitat for rare, threatened, or endangered species. And maybe it would be degraded but would still have the potential for establishing lost functions.

Category 3 are the ones that support superior habitat, hydrological, and recreational functions. It is a relatively high level of biodiversity, a high proportion of native species, and the ability to perform high levels of wetland functions.

Now moving along, let's break things out into categories, as far as what the mitigation requirements are. And some mitigation ratios vary from 1.5:1 to 3:1. For the 2s and 3s you have to look on site first for possibilities. If none are available, you have to go within the same watershed, which translates in Ohio into 37 watersheds based on U.S. geological surveys of geologic units. And then for category 1's, they can be placed anywhere within the state.

So it makes a big difference which category a wetland is going to be placed in, and based on the proposed rule as to how it is treated. So we have a real need to be able to identify people who help us break these things down into different categories. We need something that's going to indicate wetland. And in Ohio, we started thinking about a couple of things. We're working on building a bio-criteria, one of the things Tom talked about yesterday. We're specifically looking at amphibians, natural vertebrates, communities. At the same time, we recognize the need for some type of functionally based rapid assessment method. We don't have bio-criteria at this point and we need something that's going to work fast for people.

The basic setup of what we are doing is basing it on reference wetland. You see all these things working together with feedback going on for improvement. We see that as something that will keep feeding back into what we do as a rapid assessment tool. And as we get more information about what our indicators of wetlands will be, we use that for fine tuning.

We got started looking at things a couple of years ago. We knew there were a lot of assessment tools out there and we are getting a lot of different assessment tools presented to us. We took a look at a number of wetlands that we were doing for a biological assessment work-up. In fact, we did assessments using about 4 different techniques. A number of them would end up with something like this, which we would go through and identify the functions which you would end up with a grade, and then you would come up with something compiled with a range from the highest levels or something similar. It became a little tough to make calls in the field. For different wetlands we had such a wide range of functions, we felt there was a lot of subjectivity in evaluations like that. And we felt that it didn't work too well for us in Ohio. We did take a look at a wetland ratings system that was developed for western Washington and some parts of Ohio. This is the one we thought showed most promise. We would still look at a number of wetland sites that we had good knowledge about, and we found that this correlated really well with our best professional judgement, as far as function. I didn't have quite enough copies of the

Ohio Wetland Assessment method for everybody. I tried to put one on all the chairs in back, the people who are in front I will have to share. We'll kind of go through it and talk about the Ohio Wetland Assessment method and how we use it.

The first part is just general information. Before you can get it, like with the other one, you need to do a lot of research. Gather all the information about the wetland you can before you get out there. There are all types of things you want to look at before you go out on the site. Again, as far as who can use this, it does take somebody who has at least a fair amount of knowledge about wetlands and ecology.

There are 12 different areas to the Rapid Assessment. Actually there are 13, but number 13 is a professional judgement. The first 3 pretty much spend their time trying to sort wetlands out. Is it obviously high quality, or are there obviously minimal wetland functions going on? And so this first set of questions it asks is, is there any human cost to disturbance to them?

Now the flow chart situation in the first 3 questions were, if there are disturbances, it takes you to question 2. If not, then you go to 1B, which will look up some more filtering. If you get through, there may be some that you want to consider automatically putting into this category 3. And then we get into looking at specific types of wetlands. The question is, are they mature forested wetlands? And basically then you take a look. Are they dominated by trees that might be 80 years of age or older? We basically don't have any areas in Ohio that haven't been logged at one point. We maybe have a couple hundred acres of un-logged forest instead of fragmented, and so we are going back about 80 or 100 years.

You find on the next page some of the definitions of what we mean by Lake Erie coastal tributary wetlands and the lake plains sand areas. In the next part, there may be some that, because they demonstrate obviously minimal functions, which is easy to observe, they fit into category 1. We have to go through it first for 9 different physical attributes. You score the wetland. The first one is size, and this is an area where we had to modify it significantly from what the Washington State method was. We took a look at the Ohio wetland inventory, which is put together by the Ohio Department of Natural Resources. And we used remote sensing to identify the wetland areas of the State. Based on that information, the thing that we were implying was that most of the Ohio wetlands are small. We were finding that when you're getting less than 5 acres, that covers about 93% of our wetlands. So what we did was we scratched it back a little bit, on the side that was needed to get a high score. I think Washington went up to 200 acres to get a 6, but we couldn't go that high. That was one major change from the Washington State method.

The next part is wetland vegetation classes, and here you need to identify how many different classes are within that wetland. In order to be counted it has to have 30% of the aerial cover in that site, and it has to cover at least a quarter of an acre. And if you have several different layers, then it's the community that gets counted. Then you score that out. The next part

is plant species diversity. Again, you just look at each community, and you score them for how many species are dominant. Within that, that means that they cover at least 10% of an aerial view. The more predominance you have, the higher score you get for each of those.

There are also points for virginal structure with these forested wetlands. For trees more than 50 feet tall, you add an additional point. Shrubs are an additional point. Basic ground cover adds another point. Also, you can add one point if there is any open water immediately adjacent to the forest. The next area of the assessment method is wetland plants community, and you get a choice of high, moderate, low, or none. If you feel like it's not quite high, not quite moderate, it's somewhere in between, you can score a 4, rather than 5. There is a lot of room for you to make your own interpretation. Then we go to habitat "endangeredness." This is geared toward wildlife species and things that are visible in the field. Is there interactivity, are there raptor nests, is there shorebird habitat? Are there dead trees standing, or fallen trees that would supply other habitat?

On the next page, what areas hold water for at least 4 months of the year? Habitat flooded with mineral areas that can provide green habitat for amphibians. In the wild this is a real important consideration. So we weighted that and gave it 2 points. Not a real heavy weighting, but we did add some additional points for that. And add points for the fact that the wetland is part of a littoral zone of Lake Erie. The Rapid Assessment method came out with version 1 in spring of 1997, and we did a lot of field testing with it last year. We got a group of wetland experts throughout the state–universities and other state agencies–who are helping us fine tune and develop this. We did about 200 sites and then we did it again, fine tuning it. It's version 2 now, it's a draft. We're hoping after we do quite a few sites this summer we might be able to finalize it sometime in fall, or at least have a working method in the fall. But these next 3 categories are the ones that probably need the most work. The first one is wetlands stream water quality. Here you get into how the wetland relates to other water resources, especially streams, and you get into filtering and then you score it on that basis. The next area is basically how much isolation or how much protection does the wetland have. The last area is connected to other habitat areas. How does this wetland relate to other habitat areas? Then number 13, other development information. This is just an opportunity for the reviewers to add anything they feel comfortably covers either higher or lower scores. Add up the scores and you come up with an overall score. I think it is possible to get 67 points. I don't think there is any way that any wetland in Ohio scores a 67. We're still field testing, and we haven't figured out exactly where our breaks are going to be. We want to do some more field testing with it and get some more agreement from wetland professionals. We're hoping that once this gets further developed, it will be the tool of choice. Does anybody have any questions?

Question:
I have a variation of the same question I asked earlier. It appears to me that, maybe not in Ohio, but certainly in some parts of the country, I could apply this variable that you've developed here. I see wetlands that happen to be isolated, small with no big trees, and I would come out based on this scoring as not very good. Is that a problem in Ohio, or is that an exception in Ohio?

Answer:
I think there's no big score that is much lower than it should be. That's what we're trying to do in question 3–separate out the really rare and unique resources that we have in the state that might fall into that category. And then we need to go back to the drawing board with it and include some wetland types that we haven't done yet. But we haven't run up against a situation where we went out to the wetlands and it didn't fall into the area where it should have, based on best professional judgement. We haven't seen that yet. As a matter of a fact, we did a quality assessment on 12 different wetlands, we ran to the disturbance rank–the lower the disturbance the higher the score. Then we compared that with what we got with the Washington State method. We find a real strong correlation there. But the idea was, the more we were doing, the more we learned about wetlands. I think there are probably some areas where you don't capture the exact score that a wetland maybe should get. Thank you very much.